BIPV power plants and policy recommendatons

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ABSTRACT
The radiant light energy from the sun is converted into useful electricity using photovoltaic technology. Harnessing solar energy is simple and easy operation with the installation of PV modules in various configurations (open rack, roof mount, tracking, building integrated, building applied, floating). Among these configurations, BIPV is the most trending and ecologically efficient installation methods. This paper presents a study on the building integrated photovoltaic systems with the electric power system classification. This classification includes on-grid, off-grid, and hybrid BIPV power plants. The studied three classifications were compared in terms of the operation, components, installation configuration etc. General recommendations and various policy options for BIPV are also discussed. This study shows, BIPV power systems discussed in three combinations would contribute to the energy needs of the developed/developing nations by adding pleasing look to the buildings without having negative impacts on the ecology.

KEYWORDS:
BIPV; Power plant classification; on-grid BIPV; off-grid BIPV; hybrid BIPV plant; Policy for BIPV.